1: Conzemius M-4, 5 (1921) 1932
SA15 Mosquito SA15

412 companion at work and on voyage, and the main tool in house, garden, field, and bush. The Indian uses it to dig postholes for his house, to cut down small trees, shrubs, lianas, grass, or weeds. With the machete he cuts down the underbrush when making a plantation and clears the latter from time to time of weeds and young bush. With the machete he also defends himself against wild animals, snakes, and the like, and, if necessary, against his own kind, which is often more dangerous than the wild beasts of the forest.

[934] Formerly all the machetes used on the Mosquito Coast were imported from England, but in later years they were brought from the United States and from Germany.

412 313 AXES.—The Indians are very good at plying the ax (M.: *asa*, from the Spanish "hacha"; S.: *ki*, *kidak*), as many of them have been working at the mahogany camps. The export of this valuable wood has been going on with various long interruptions for over two centuries. Even the women handle the ax fairly well, and cut up small tree stems to be used as firewood. The rectangular-shaped so-called American felling axes or Canada wedge axes are preferred by these Indians; in shape they resemble somewhat the *tuba* fish, and for that reason the Miskito call them *tub'asa*.

412 ●172 STONE AXES.—Single or double bladed stone axes or celts (M.: *ahwani mahbra*, *imyula mahbra*; S.: *ahwana suma*, lit.: "thunder egg" or "lightning egg") have been unearthed in various parts of the country. They are grooved or ungrooved, and were firmly fixed in the thick part of a stone-cut wooden handle, or the handle was merely tied firmly to the ax with the aid of a withe passing around the groove. Some of these celts were provided with a short handle cut of the same solid rock. Dampier (I, 85) mentions some good grooved axes among the Indians of Rio Escondido (Kukra-Sumu), which were "flat and sharp at both ends," and were 10 inches long, 4 inches broad, and 3 inches thick in the middle.

Two simple stone axes from the Mosquito Coast have been depicted by Bovallius (II, 299, figs. 81, 82). Three fine monolithic axes from the Bluefields region have been described and illustrated by Saville (b: 34–36, fig. 15). The blade of these axes is of a form foreign to Central America, resembling certain axes from the Lesser Antilles and northern South America. In these three specimens the rounded handle, which has a length of 12 to 12½ inches, is slightly curved. They are respectively in the Museum of the American Indian, Heye Foundation (a), the Peabody Museum of Harvard University (b), and the United States National Museum (c). The first one of them (a) was acquired in 1924 in Nicaragua by Mr. D. E. Harrower. The blade is comparatively longer than in the other axes of this type and the handle is elaborately finished, being decorated with three series of longitudinal grooves. The second ax (b) is carved from a

1: Conzemius M-4, 5 (1921) 1932
SA15 Mosquito SA15

heavy, compact, brownish-green stone with decorations somewhat similar to the preceding one, but the handle has, besides, three transverse oval decorations over the section adjacent to the blade. The third specimen was collected by Mr. J. O. Thomas of Bluefields. It is plain and made of indurated volcanic tufa. The two last-mentioned axes (b and c) have already been described and pictured in a previous publication by Saville (a: 10–11, pl. v, Nos. 5 and 4). Another beautiful ax, perhaps of the same type, with blade and handle carved of one piece of heavy, compact, light-colored rock, was unearthed at Bluefields in 1849 and is now in the Museum of the Moravian Mission at Herrnhut in Saxony.[28]

A beautifully shaped double-bladed stone ax was obtained by Boyle in 1866 on the upper Rio Escondido and pictured by him (b: II, 144, fig. 1); it is now in the British Museum. It is apparently of volcanic stone and is 17¾ inches long and 12¾ inches wide across the blades. The end of the flat handle is perforated. The illustration has been copied by Bancroft (IV, 59, fig. 3) and by Joyce (18, pl. I, fig. 1). Saville (a: 11–12, pl. VI, fig. 1) describes and illustrates this ax together with two other double-bladed specimens from the Atlantic coast of Nicaragua, which are fashioned from an igneous rock, possibly diorite. These two were obtained from a Miskito chief by Mr. J. O. Thomas of Bluefields and are now in the United States National Museum. The largest one of them (Saville, a: 12, pl. VI, fig. 5) is 10¾ inches long and 6¼ inches across the blades; the handle is rounded and has a conical end. The other specimen (pl. VI, fig. 2) is only 8½ inches in length and 7¾ inches wide across the blades. Like that illustrated by Boyle, it is perforated through the end of the flat handle. Other stone axes from the Mosquito Coast are in the collection of Doctor Heuhaus in the Museum für Völkerkunde in Berlin (Lehmann, b: 715).

The modern Indians do not know that these stone axes are artificial and that they are the work of their forefathers. They believe them to be "thunder-bolts," as do also the Creoles and Negroes; the same idea is also entertained by the Ladinos, who call these celts "piedra de raya." It is very probable that these antique axes were also used as defensive weapons in former days, and perhaps also for ceremonial uses.

ADZES.—Adzes are now very common and are used for the making of canoes and other objects of wood; they are used in similar manner as those of our joiners and carpenters. This tool is probably of post-Columbian origin, although the Sumu have a native name (*parin*) for it; the Miskitu call it *ats* from the English name. Stone adzes have never been found on the Mosquito Coast, although they are frequently

[28] Cf. Frederick Starr in Internationales Archiv für Ethnographie, Leiden, vol. v, 1892, pp. 88–89.

1: Conzemius M-4, 5 (1921) 1932
SA15 Mosquito SA15

this is done by them in isolated cases only; they use a round, low bowl or *batea*, in which they place some of the auriferous sand together with some water. Then, whirling the *batea* rapidly, a feathery stream of mingled sand and water flows constantly over the edge. When the sand is nearly all exhausted, the bowl is filled again, and this process is repeated a number of times. Finally a little deposit of grains of gold will be found at the bottom.

These Indians have no name in their own language for either gold or silver, but they call these precious metals "yellow money" and "white money" respectively. Their word for money (M. and T.: *lala;* P. and U.: *lihwan*) might have designated gold originally, or perhaps metal in general. Still, there is a native name for iron or steel (M. and T.: *silak;* P. and U.: *yasama*).

Cheap bracelets, earrings, and finger rings of foreign origin are now very common among both tribes. The iron and steel objects, which are now in universal use on the coast, have not been cast or forged locally, but have been obtained in trade. Harpoons are made from our common triangular files with the aid of another file. This process is very slow and tedious. The iron points or "heads" for arrows and spears are generally made from old cask hoops or from other scrap iron.

STONEWORK

METATES.—Stonework is practically limited to the manufacture of crude metates or maize grinders (M.: *walpa-akbaya;* T., P.: *ki-watak;* U.: *ki-tiknaka*) which are used for grinding maize, cacao, or other grains or fruits. They are merely plane slabs of a tufflike rock with a slightly concave grinding surface, on which the grains are crushed with the aid of a handle or metlapil (M.: *walpa-mihta;* S.: *ki-mak*). These crude metates are made with the aid of a hard blackish stone chisel (M.: *kwa-siksa;*[a] T., P.: *pransa, paransa;* U.: *ki-tisna*).

ANTIGUALES.—Elaborate metates, cylindrical bowls and mortars of a hard granitelike material are occasionally found on the Mosquito Coast. Isolated specimens of these articles are met with, but as a rule they are found in deposits from miniature size, perhaps children's toys, to giant sizes for ceremonial purposes. These objects exist in all stages of manufacture, but the finished product is now very scarce, having either been taken away or broken.

Such old sites or "antiguales," as they are known locally, are especially numerous in Honduras between the rivers Plátano and Paulaya; they are found generally on some elevated spot within a

[a] At Ciudad Antigua, in the Nicaraguan department of Nueva Segovia, I heard this tool called "cuabul" (=*kwa-bul*) by the Spanish-speaking inhabitants. In the Miskito language *sikes* means "black," while *bul* is "mottled" or "speckled."

1: Conzemius M-4, 5 (1921) 1932
SA15 Mosquito SA15

short distance from a small creek. A picture of one of these sites is given by Spinden (536). Occasionally these antiguales are surrounded by low walls, perhaps remains of former fortifications; others again were apparently defended by ditches and perhaps by palisades also. 324 172

ANCIENT METATES.—The metates found in these deposits are supported by three long, well-centered legs, which are generally covered with geometric designs; in front there is a bird or animal head (eagle, turtle, alligator, or jaguar). The Indians occasionally dig them up to be used in their households. Some fine specimens have been broken by man or by falling trees. Giant metates, which may reach over 6 feet in length, are still found, but the sculptured head has generally been removed from them. They remind us of the wooden stools still found in the Indian dwellings and it is very likely that they were used as ceremonial seats. In the Museum of the American Indian, Heye Foundation, there is a metate from the Mosquito Coast (Hodge: 56). Several large specimens from an important site discovered near Cuera Hill (to the south of Pearl Lagoon) about 30 years ago upon clearing the land for making banana plantations are in the American Museum of Natural History. The Peabody Museum of Harvard University also owns a few metates from the vicinity of Bluefields. [531]

ANCIENT BOWLS.—Cylindrical bowls with three short legs and made from a very hard granitelike rock are also found in the above-mentioned old sites, but they are less common than the metates. Two knobs near the rim, carved into bird or animal heads, serve as handles. These bowls or vases are ornamented with geometric motives, of which the most common is the incised guilloche, or rope pattern, of either curvilinear or angular construction.

The first description, accompanied with illustrations, of these "granite vases" from the Mosquito Coast is given by Pownall (318–324, pl. XXVI), who figures three of these objects. Two of these belonged to Lord Hillsborough. One of these latter (No. 1) is very small and has an animal head on one side. The larger one (No. 2) is more interesting; it is about 12 to 15 inches in diameter and 10 inches in height, with plain legs. There are two rows of diamond-shaped ornaments on the body of the vessel; the two handles take the form of a head and a tail, but the head is partly broken off. The third vessel (No. 3) is about 10 to 12 inches in diameter and height, but at the top it is somewhat narrower; it has carved legs and two head ornaments and is perhaps the best specimen in good condition found in the country. The bowls No. 2 and No. 3 have been reproduced by Humboldt (I, p. 238, and II, pl. 39) and by Dupaix (I, div. II, 27–28, and II, suppl. pl. VII, No. 1). The illustration of No. 3 has been copied also by Bancroft (IV, 26).

1: Conzemius M-4, 5 (1921) 1932
SA15 Mosquito SA15

Pownall (319) refers to another of these bowls in the British Museum, which belonged to a collection brought from Jamaica by Sir Hans Sloane. This is perhaps the one depicted by Joyce (p. 74, pl. VI, fig. 1) which resembles No. 3 described above.

In 1921 the writer found a number of these vessels, but all badly broken up, on the right bank of Rio Paulaya. Some of them were not detached from the quarry out of which they were formed. It is, however, not known from what site the marble was quarried. Bowls of similar material and technique have also been met with in the Bay Islands and in the valley of Rio Ulua. A large specimen is in the Museum of the American Indian, Heye Foundation (Hodge: 56).

STATUES OR CARVED PILLARS.—At certain old sites may be found some high slabs of stone which were originally placed upright, reminding one of our tombstones. Nearly all of them have now tumbled down. Occasionally some greatly obliterated geometric designs, or spirals, may be found on them.[28]

Spinden (539) pictures a stela or stone pillar on Rio Tocomacho (Honduras) which is 8 feet in height and nearly a foot square. It is covered on all sides with pictographic designs, chiefly spirals and scrolls; on one of the four faces there is a grotesque figure with a reptilelike creature on its head. Such stone pillars may also be found in other parts of the Mosquito Coast, but they are not common. Large stone statues, attaining as great a height as 12 feet, are, however, the outstanding feature of the archeology of the Pacific half of Nicaragua, especially of the great lake region.

Le Baron (217–222) describes and depicts some stone ruins from the left bank of Rio Prinsapolca, about 134 miles above its mouth. They consist of three monoliths, about 8 feet high, forming a triangle; the ground between them was paved with stones. These monoliths had fallen to the ground and were broken; on some of the faces there were rude carvings, greatly obliterated.

CARVED ROCKS

Pictographs may be found on the rocks in the bed of nearly all the larger streams, generally at the rapids and falls. They must have been made many centuries ago, for they are considerably waterworn, and often may be followed easier with the finger than with the naked eye. Many of these carved rocks are visible during the dry season only and are completely under water during the rainy months, owing to the rise of the rivers. (Fig. 1.)

WHERE THEY ARE FOUND.—Such carved rocks have been observed by the present writer at different places on the Rio Coco (at Wirapani,

[28] The modern Indians have no traditions concerning these ruins found in their territory, and ascribe them to the evil spirits.

1: Conzemius M-4, 5 (1921) 1932
SA15 Mosquito SA15

Waspuk, Kiwras, above Raiti, at Kunkun mawan and at Tawit); they are known to exist also in the rivers Plátano, Patuca, Wawa, Prinsapolca, Tuma, Punta Gorda, Indio, and Maíz. They appear to be particularly numerous on the Siquia and Mico, which two streams together form the Rio Escondido or Bluefields River (Boyle, b: I, 296–299; Pim and Seemann: 401; Wickham, b: 243, 245; Belt: 52–53). Some extravagant stories of great statues carved in human and animal shape and hewn out of a solid cliff on the upper Rio Mico have been circulating on the coast, but it appears that these giant statues are merely rude carvings on the rocks similar to the ones found in other parts of the country. Carved rocks are found in many rivers emptying into the Caribbean Sea, and a good account of those met with in South America has been given by Koch-Grünberg.* The geographical names Gualpulban (M.: *walpa-ulbas*), Quiulna (T., P.: *ki-ulna*) and Quiultan (U.: *ki-ultas*), which are found scattered in various parts of the Mosquito Coast, may furnish a clue to the presence of such pictographs in the neighborhood. These various names mean "written rock" or "painted rock" and correspond to the Spanish "piedra pintada."

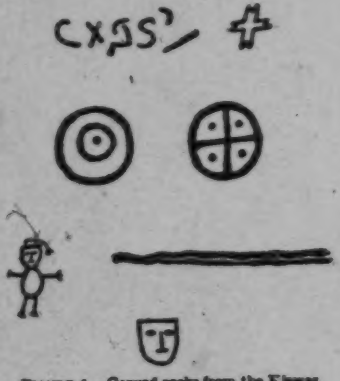

FIGURE 1.—Carved rocks from the Kirwas Rapids (Rio Coco)

MOTIFS.—The carvings consist chiefly of very curious figures, which it is often difficult to identify. Sometimes they represent human figures, but the greater part of them appear to be animal designs: jaguars, alligators, monkeys, frogs, tortoises and serpents. Occasionally geometric figures, as spirals and scrolls, are depicted, but floral designs are conspicuous by their absence. Sapper (a: 275) pictures some carved rocks from various parts of Rio Coco: Valpa tilpan (=Wirapani), Kiulna (=Kunkun mawan) and Davuit (=Tawit). A photograph of a large bowlder with carved figures from Rio Plátano is given by Spinden (537).

ARTISTS.—We do not know who were the authors of this work. The Miskito are by all means out of the question, for they are comparatively new immigrants into the regions where pictographs are to be found. They ascribe them to the Sumu, who formerly occupied most of the territory in question. But the latter Indians are unanimous in declaring that this work was done by the evil spirits (*walasa*) at a time when the rocks were still soft.

* Südamerikanische Felszeichnungen. Berlin, 1907.

1: Conzemius M-4, 5 (1921) 1932
SA15 Mosquito SA15

212
172 WRITING.—The carvings on one of the bowlders at the Kiwras Rapids on Rio Coco are said to resemble somewhat the characters of the Latin alphabet. Wickham (b: 245) heard of some "writing" on rocks of Rio Mico, which he considered—quite erroneously of course—inscriptions in Latin made by the early Jesuit missionaries. Neither Miskito nor Sumu appear to have possessed the art of writing as did their western neighbors, the Nicarao and Chorotega. According to Oviedo the two latter tribes had books of parchment made from deer skins. Picture writing was also practiced, and is still, by the Cuna Indians of Panama, as has recently been ascertained by Nordenskiöld.[36]

RUBBER COLLECTING

314
439 In former days the Indians used to collect rubber from a wild-growing tree (*Castilla* sp.), which is found nearly all over the country. This industry started about 1860, first on Rio San Juan, and gradually spread to the remainder of the Mosquito Coast. The Indians sold their rubber to the local merchants, who generally made large advances to them. About 1912 and 1913, when the export of rubber ceased, owing to the low price caused by the large production of plantation rubber in the British and Dutch East Indies, many Indians found themselves heavily in debt to the merchants.

314 The rubber collectors or "huleros" first made a rude ladder out of the lianas that hang from the trees; this was done by tying short pieces of wood across them with the aid of smaller lianas. Later iron spurs were introduced and attached to the feet to climb the trees. With the machete they then scored the bark with cuts having the shape of the letter V, the point being downward. Such cuts were made all the way up the trunk, at a distance of about 3 feet from each other; they extended nearly round the tree, but the latter was on no account to be completely girdled. At the bottom of these series of cuts a spout was inserted to conduct the latex juice into buckets or other containers. In about half an hour all the whitish milk had run out of the tree.

Afterwards the latex was strained and caused to coagulate by the addition of an alkaline decoction made from the juice of the chajmol vine (*Ipomoea bona-nox* L.; M.: *tatako;* T. and P.: *tutuk;* U.: *ulupuy*) or from that of a liana (*Calonyction speciosum*); this was combined with the latex in the proportion of 1 pint to 2 gallons. To prevent putrefaction coagulation must be effected within about 24 hours after the collection of the milk. The resulting mass was then made into round flat cakes, which were exported under the name "sheet rubber"

[36] Picture Writings and Other Documents. Comparative Ethnographical Studies, vol. 7, part 1 (1928) and part 2 (1930).

1: Conzemius M-4, 5 (1921) 1932
SA15 Mosquito SA15

the neighborhood of the hut, where it is left to burn slowly, until all the wood and coals have been consumed. Neither paint, glaze, nor plastic ornamentation is applied nowadays.

ANCIENT POTTERY VESSELS.—The pottery objects found in many parts of the Mosquito Coast, chiefly in old burial grounds, indicate a much greater skill in this art than that possessed by the present-day inhabitants of the country. Most of such ware is unpainted, but fine plastic ornamentation was applied to the knob handles and occasionally to the legs also. The designs represent chiefly heads of jaguars, alligators, turtles, and birds. Fragments of tripod vessels with legs modified into animal legs may also be found; sometimes these legs are hollow and contain clay balls as rattlers. In the shell mounds or kitchen middens near the sea fragments of pottery vessels with figurine handles have been discovered. A geometric motive, which is often found on old pottery vessels and on stonework, is the incised guilloche or rope pattern, which may have a curvilinear or an angular construction.

ANCIENT CLAY MASKS.—From the interior of the Mosquito Coast, probably the Sumu territory, the discovery of human heads, busts or entire figures, made of clay, has been reported. The material used for this purpose is said to have been mixed occasionally with gold dust. These objects are supposed to be the likenesses of chiefs or other prominent persons who had been buried at the spots where these finds were made. A number of these "masks" were brought to England from the interior of the Mosquito Coast about the year 1775, and eight of them have been described and depicted by Rogers (107). As these masks have their backs concaved in a cylindrical form, they were probably parts of sepulchral urns.

COTTON TEXTILES

CULTIVATION OF COTTON.—The art of weaving has not been mastered by the young generation, but cotton (*Gossypium* sp.; M.: *wahmuk;* S.: *wahmak*) is still cultivated in a desultory way. The bushes, which attain a height of from 8 to 12 feet, may be found in the neighborhood of almost every hut; they flower the whole year round, and at any time buds and open bolls may be found on the same plant.

A FEMALE OCCUPATION.—Dyeing and spinning cotton and weaving it into cloth is exclusively woman's work. Exquemelin (Fr. edit.: II, 269), who wrote during the second half of the seventeenth century, states that the women only spin the cotton and that the men do the weaving.

TYPES OF FABRICS.—The elder Sumu women still weave cotton into loin cloths (M.: *palpura;* T. and P.: *dóh;* U.: *ani*), girdles or

1: Conzemius M-4, 5 (1921) 1932
SA15 Mosquito SA15

226 At night torchlights are used to attract the fish and induce them to rise to the surface, where they are killed by a stroke with the machete; the latter weapon is also used to chop the "sleeping" fishes, which are easily detected with the torches.

Along the river banks and among the rocks the Indians also "feel" for certain fishes and for crustacea.

[262] 225 CATCHING ALLIGATORS.—The tail part of young alligators and crocodiles is also occasionally eaten. These ugly reptiles are caught with the aid of large hooks. Young (61) gives the following account of the manner practiced by the Sumu to catch these repulsive creatures but, needless to say, this applies only to young specimens: "A Sumu Indian, when he sees an alligator near the banks of the river, will boldly swim under water, carrying a native-manufactured rope with a noose in it, until he reaches the creature; he will then dexterously affix the noose to its leg; his companions at the same moment, having hold of the other end of the rope, pull it vigorously, and the alligator is speedily drawn out and despatched."

226 CRUSTACEA AND MOLLUSKS.—Lobsters, crabs, and mollusks (conchs, large whelks, mussels, oysters) are also gathered by the women, and form an important item of food. In the larger lagoons two kinds of edible oysters are common; the smaller one, or mangrove oyster, attaches itself to the roots of the mangrove tree, while the larger one occurs in banks in certain parts of the lagoons.

● 172 A small bivalve mollusk, known locally as "cockle" (M. and S.: *dhi*), appears to have played in former days an enormous rôle in the food supply. A number of refuse heaps, up to 20 feet in height, consisting of cockle shells intermingled with fragments of domestic utensils of stone, bone, or pottery, have been discovered on the western shore of Bluefields Lagoon. Two of such *tumuli* were examined by the writer on Cucra Point in 1921. They consisted nearly exclusively of the above-mentioned small cockle shell, which mollusk is found in the shallow water of the lagoon. Oyster shells were rare, although extensive oyster banks exist also in certain parts of the Bluefields Lagoon. These shell mounds (shell heaps, kitchen middens, kitchen débris), called also by the Danish word *kjøkkenmødding*, indicate undoubtedly old dwelling sites; from their great size it is evident that long periods of time must have been required for their accumulation. A number of them were also found at the site of Bluefields and likewise a little to the north; they have been carried away to "metal" the streets of that town. See also Bell (a: 260; b: 18), Wickham (b: 251–252), and Spinden (532–533).

226 777 FISHING CHARMS.—Certain charms are said to be very efficacious at fishing. Stones found in the stomach of fishes are highly valued, as their possessor will have good luck in catching that particular species of fish. Heads and spines from the larger species are also